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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/914,603	01/09/2002	Nicholas Thomas	PA-9902	7928

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AMERSHAM BIOSCIENCES  
PATENT DEPARTMENT  
800 CENTENNIAL AVENUE  
PISCATAWAY, NJ 08855

EXAMINER

CHAKRABARTI, ARUN K

ART UNIT	PAPER NUMBER
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1634

DATE MAILED: 03/19/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/914,603

Applicant(s)

Thomas

Examiner

Arun Chakrabarti

Art Unit

1634



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (e). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on Aug 28, 2002
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on Jan 9, 2002 is/are a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some\* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. 09/914,603.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 1 6) ☐ Other:

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## **DETAILED ACTION**

### ***Specification***

1. Claim 1 is objected to because of the following informalities: The spelling “analysing” on lines 1 and 13 and “hybridisation” on line 11 are wrong. Appropriate corrections are required.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 1-17 are rejected under 35 U.S.C. 102(a) as being anticipated by Kamb et al. (PCT International Application Number WO 98/26098) (June 18, 1998).

Kamb et al. teaches a method of detecting and analyzing differences between nucleic acids from two sources (Abstract), which method comprises:

- a. providing the nucleic acids from two sources as labeled probes wherein the nucleic acids from two sources are labeled with two different markers (Abstract, Claim 1, Figure 1, and Examples 1, 2, and 12);

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b. forming a mixture of the labeled probes with pooled reagents wherein each of the pooled reagents comprises a population of beads carrying a polynucleotide target, the polynucleotide target of any one of the pooled reagents being different from the target of any other of the pooled reagents and the beads of any one of the pooled reagents being distinguishable from the beads of any other of the pooled reagents (Abstract, Claim 1, Figure 1, and Examples 1, 2, and 12);

c. incubating the mixture under conditions to promote specific hybridization between probes and targets (Abstract, Claims 1-2, Figures 1, 15B, and Examples 1, 2, and 12); and

d. analyzing each bead in the mixture by flow cytometry (Example 2 and page 33, lines 16-23 and Figures 17-18 and Example 18, Page 87, line 17 to page 88, line 19).

Kamb et al. teaches a method, wherein the nucleic acids from the two sources are mRNA or cDNA from cells or tissues (Figures 8, 14, 18A-D).

Kamb et al. teaches a method, wherein the polynucleotide targets are cDNA derived from cellular mRNA (Page 57, lines 3-5 and Examples 9 and 12).

Kamb et al. teaches a method, wherein the polynucleotide targets are PCR amplimers (Example 9).

Kamb et al. teaches a method, wherein the polynucleotide targets contain terminal biotin groups through which they are attached to streptavidin-coated beads (Page 34. Lines 3-8).

Kamb et al. teaches a method, wherein the polynucleotide targets and the nucleic acids are single-stranded nucleic acids (Figures 1, 11, 13, 14, and 18).

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Kamb et al. teaches a method, wherein beads of one pooled reagents are distinguishable from beads of another pooled reagents by size, nature, or concentration of one or more markers attached to the beads (Examples 17-19 and claim 2-13, 25-33).

Kamb et al. teaches a method, wherein fluorescent markers are attached to beads (Page 68, lines 12-16 and Figure 11).

Kamb et al. teaches a method, wherein each of the nucleic acids is labeled with a fluorescent tag to indicate its source (Figures 1, and 11 and Page 30, line 4 to page 33, line 11).

Kamb et al. teaches a method further comprising the step of analyzing the data obtained by flow cytometry to yield information about the relative and/or absolute abundance of individual nucleic acid sequences contained within the nucleic acids from two sources (Example 2 and page 33, lines 16-23 and Figures 17-18 and Example 18, Page 87, line 17 to page 88, line 19).

### ***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arun Chakrabarti, Ph.D., whose telephone number is (703) 306-5818. The examiner can normally be reached on 7:00 AM-4:30 PM from Monday to Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion, can be reached on (703) 308-1119. The fax phone number for this Group is (703) 305-7401. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group analyst Chantae Dessau whose telephone number is (703) 605-1237.

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Arun Chakrabarti,

Patent Examiner,

February 26, 2003

*Arun K. Chakrabarti*  
ARUN K. CHAKRABARTI  
PATENT EXAMINER